

The Honest Scientist

Miles Mathis

As I discuss on my [KISS](#) and [Per Bak](#) pages, I was taught **increasingly complicated theories** of the Universe in school, up to and including University. On this page I discuss one that at its heart is perhaps the simplest one possible – yes, *a model of how our entire Universe has formed and works* (at least the less complex bits), starting from the ground up. References to the work of Miles (and others) are given in the main text numerically, with the full list at the bottom of the page.

Miles has published a large amount of material over the years covering Art, Mathematics, Physics and a few other areas. I came across his works several years ago more by accident than design, although given the breadth of his work and the reach of the internet these days it was probably inevitable that someone like myself who was looking for alternatives to the standard model would eventually stumble across him.

I will only be covering his work in Physics and to a lesser extent Mathematics. Although I believe the Plasma Cosmology and Electric Universe Theory (PC/EUT) models are a very good fit for the data available on phenomena ranging from the laboratory to the cosmos, I find they are a bit lacking in terms of describing what happens at a molecular level on down, and they also require an aether model. I feel (C8) that Miles's model slots in very well at this point, in addition to going on to explain a few other things at a larger scale that aren't yet handled by PC/EUT.

Also, Chemistry is the first main area of Science in which I realised the standard model was seriously flawed, so I've been looking for a good alternative model for decades, and I believe this could be it.

Unfortunately there is a large learning curve with Miles's work; he tends to cover a subject at a time and then moves on to other ideas, then a year or two later may come back to an original subject with extra information and more detailed ideas, but in a different document. As such I have pulled together what I consider to be the main points in his documents to describe Miles's model from the subatomic up to the molecular model, with a possible explanation of what electricity is at the end. I've run this by Miles and he agrees that I'm not misrepresenting what he has said. I recommend reading the original work of Miles as well and have included the appropriate references.

Executive Summary

There is only one fundamental particle in Miles's model of the Universe, which is about as small compared to an electron as an electron is to us, and it's these particles zipping about that form the aether and charge. When they bang into each other (usually on the side) that leads to spin (or de-spinning); axially around a pole

like the Earth spinning, around a central point in the x-axis like the Earth orbiting the Sun, and also about y and z-axes, with fixed “jumps” between layers like a gyroscope. Similar mass particles like protons and neutrons have the same number of spin levels but slightly different outer (x/y/z) layer orders.

The core breakthrough in Miles’s Model is that once there are enough spin layers on the fundamental particle they act as a rotating porous sphere/cage like the Sun, and have additional mass/energy beyond the fundamental particle and spins due to an excess of smaller particles coming in mainly through the poles and going out mainly around the equator, so much so that for a proton ~95% of its “mass” is actually this stream of smaller particles temporarily captured (but merely passing through). This stream then causes electrons/protons to “attract” and “repel” each other via real physical interactions, with certain configurations being stable and forming the different elements, and certain configurations of these atoms being stable and forming molecules. Certain configurations of these align in a manner that allows huge streams of these particles to travel in the one path which gives us electricity, with the spinning around the outside magnetism.

Ergo you have subatomic, EM, atomic, molecular, chemical and a host of other processes explained via one mechanism, so fulfilling Per Bak’s discovery that Nature is fundamentally simple, with complex processes emerging from this underlying simplicity.

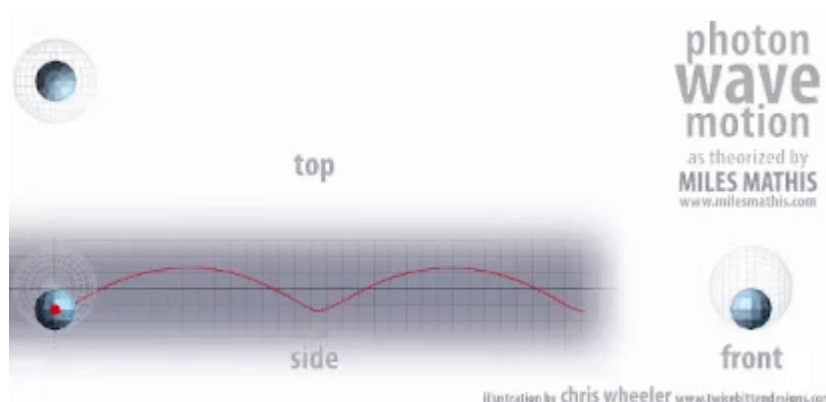
This is explained in more detail below.

The B-photon, or Charge

In Miles’s model the basic unit of all matter is the B-photon (B for bombarding), which can effectively be treated as an indivisible sphere; a very small billiards ball (like the original idea of the Greek philosophers Leucippus and Democritus of the atomos, or atom, and the similar idea of the Hindu philosopher Kanada [1, 61]). Unlike the conventional view of physics these have rest mass and volume (radius $\sim 2.74 \times 10^{-24}$ m, mass $\sim 2.77 \times 10^{-37}$ kg) [2, 3, 6]. That means it is about as small compared to an atom as an atom is to a small village. Space is full of them (averaging around 56 million per cubic meter, or 56 per cubic centimetre [3]), and Miles refers to the sum total of them as the “charge field”. However, as they are so small they rarely interact with each other, even when travelling vast distances at c (the speed of light) – if we scaled up the B-photon to the size of a human there would only be around 100 of them in the entire galaxy [3, 4]. (Actually c is an average speed; some particles will be slower, and some faster, thanks to collisions – c is the number you arrive at given the size of the particles and the number in a given volume [6], similar to what we’d get if we consider B-photons to be particles in a gas and then calculated the RMS or root-mean-square speed using kinetic theory of gases [58], although as Miles has pointed out that theory tends to break down unless you’re measuring a gas at around room temperature [59, 60].)

The Photon

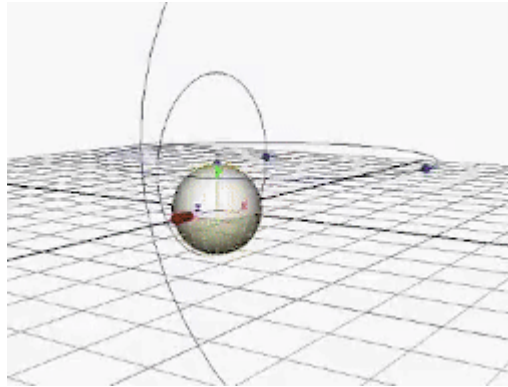
Given enough time two B-photons will eventually collide. Statistically this is most likely to be a tangential rather than head-on collision, which will cause them to spin about an axis, just as the Earth is spinning about an axis between what is defined as the North and South poles. A spinning and moving B-photon is what we normally call a photon (or to be precise, we generally measure a group of them and call that EM radiation, like light) [5, 6]. We measure the sum total of these as the cosmic microwave background radiation [7, 8], or when not moving as an electron at rest (although generally we measure an electron in motion with an x-axis spin). In addition the particle can spin end over end – this is what makes a particle look like a wave when you measure it in certain ways – for this I highly recommend checking out the videos at <https://www.youtube.com/watch?v=IG1sCHVr4BU&feature=youtu.be> plus <http://milesmathis.com/wave.mov> and <http://milesmathis.com/freq.pdf> – here's a cut-down GIF image of the video:



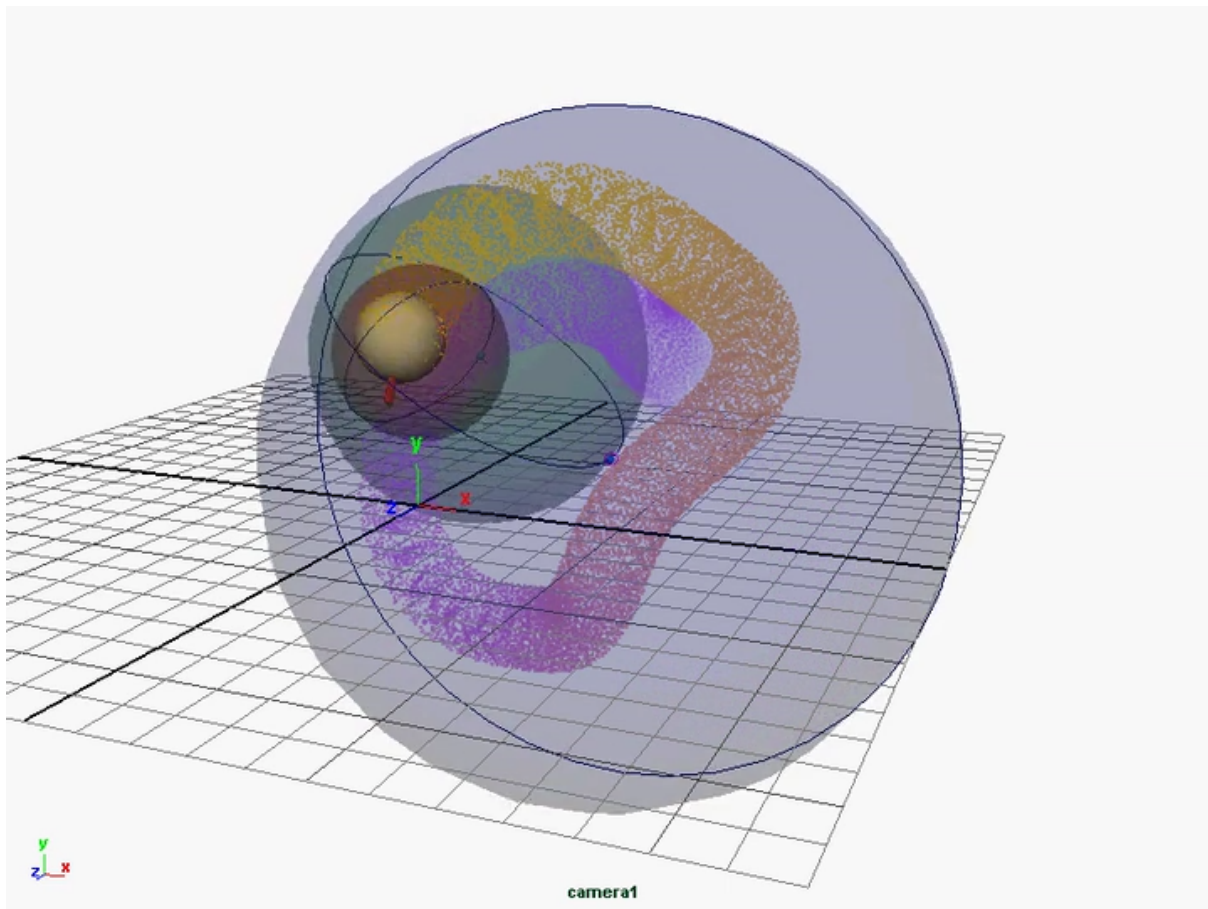
Mile's Photon Wave motion by Chris Wheeler [54, 55]

As with gyroscopes, stable spins end-over-end can only be added in the 3 spatial dimensions; x, y and z. Each additional spin doubles the effective size of the particle as it appears to most forms of measurement, and initially doubles the measured energy as well [5, 57], although this eventually changes (see below).

Once you have the 4 basic spins you can add further levels of spin, building larger and more energetic particles (well, photons initially). So in Miles's Model ALL fundamental particles are created from the B-photon with various levels of spin, plus space – very similar to the ideas of atomos and the void of the Greek Philosophers 2500 years ago, with the crucial addition of spin. I found the concepts of stacked spins hard to visualise until I saw <https://vimeo.com/188447627> [53]:



*Stacked Spins by Dragon Face – cut
down GIF [53, 54]*

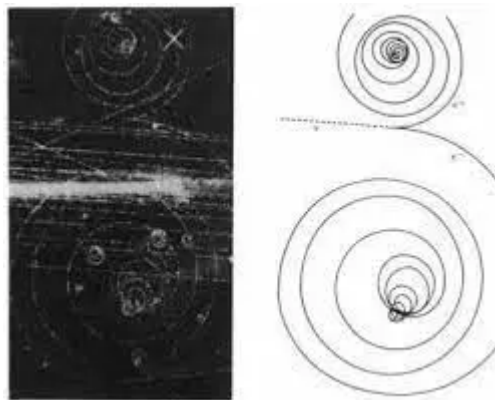


Stacked Spins by Dragon Face – <https://vimeo.com/188447627> [53]

See also <https://vimeo.com/276552568> for an example of a B-photon gaining first axial and then x-spin, or <https://vimeo.com/276665562> for all 4 sets of spins, and https://www.nevyns-lab.com/mathis/app/SpinSimulator/app.html?set1=t&set1_levels=t,t,t&marker=line%20groups&rec=yes

(unfortunately no longer available as of early 2021, although with a bit of tweaking Nevyn's Photon Spin simulation shows similar details at <http://www.users.on.net/~Nevyn/science/physics/PhotonSpinViewer/>). This is also what results in quantization, Planck's constant et al [10].

In Miles's model antimatter is merely matter with an opposite external spin – consider two of the larger particles with opposite spins slamming into each other in a head-long collision – the outermost spins will be cancelled out and result in the “smaller” particles moving off with more kinetic energy; this is effectively a matter/antimatter collision [11]. Miles believes that just as there is a fundamental asymmetry in the galaxy (i.e. it is spinning around an axis in one direction) and the solar system (ditto) there is a fundamental asymmetry in the number of B-photons that are spinning one way vs. the opposite way (which might be different in other areas of the Universe). He believes that there are roughly twice as many “matter” B-photons as there are “anti-matter” B-photons in the vicinity of the Earth (it might vary elsewhere), based on photos of what are supposedly creations of electron-positron pairs – as per <http://milesmathis.com/spiral.pdf> you can see the positron has a smaller and tighter spiral than the electron, despite both having the same mass and equal but opposite charge.



*Electron-Positron Pair (Blackett,
1933 experiment)*

Whilst photons in space will be spinning at all angles relative to each other, in a strong electromagnetic (EM) field, such as that surrounding Earth, they will tend to become spin-aligned over time.

Seeing as the wave motion of particles is merely an artefact of measurement of the fundamental B-photon, we no longer have a problem with wave/particle duality. We also no longer need an aether for waves to be moving through – we just have an absence of everything which is space through which these B-photons (and emergent particles made from these) are passing through – a background, not a medium. However, the sea of B-photons does act as an aether for purposes of some definitions – so there is an aether, and isn't an aether, depending upon which definition or form of measurement you use [12, 13, 14].

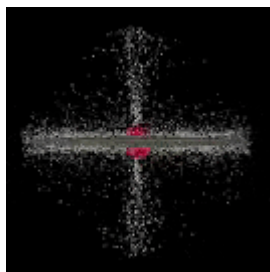
Electrons, Protons and Neutrons

Particles with multiple stacked spins act as little “engines”, channelling B-photons. This is why we don’t just have B-photons and a few particles spread throughout the Universe; the very presence of matter leads to “clumping”, just as you find with streams of ions leading to Birkeland currents which in turn concentrates matter along filaments.

Miles defines an electron as a B-photon with several groups of stacked spins, and an axial spin on top of that, whereas a proton and neutron each have a further x, y and z spin – in Miles’s model the only difference between a proton and a neutron is the way the spins are stacked [15]. For protons the B-photons come mainly into the poles and out at the equator in the same state that they came in – possibly in vortices [16]. For anti-protons the B-photons are channelled in a different way and come out upside-down in comparison. In a neutron the B-photons come out the same way they came in, cancelling each other out. This is why a free neutron decays fairly quickly outside an atom but the proton and anti-proton do not – the neutron in comparison is “naked” which means it’s a lot easier for B-photons to bash into it and break it up, whereas the proton and anti-proton have a lot of “hairs” protecting them in the form of the channelled B-photons going in and out. This also explains why the neutron appears to be slightly more massive than the proton – more B-photons are being “trapped” inside the neutron in comparison to a proton or anti-proton at any point in time.

These emitted B-photons are what we measure as thermal (or “black-body”) infrared radiation – generally we’re only measuring the energy coming out, rather than going in. This is a key point – the amount of B-photons being channelled through what we call matter is **huge** – Miles says that electrons have B-photons to the tune of about 35,000 times the mass of the electron passing through them *every second*, and protons about 19 times their own mass per second [56]. This means that the ~95% of the “missing mass” of the universe is actually these B-photons being “recycled” through electrons, protons, and everything else we encounter with our senses [51].

So when you look at a solid object it’s only ~5% of what you think it is – what we see is only a skeleton, or a blueprint, of what stays in the one place for an extended period of time. The other ~95% is changing all the time – some of that glass of water you look at will actually be inside you a fraction of a second later without you lifting it to your mouth, and some of you in it, whilst after a few seconds very small amounts of what was in both you and the glass could be in a rock on the moon.



*Nevyn's Periodic
Table – Proton (H)
[52, 54]*

Because at any given point in time electrons (or maybe the level “below” it) or larger particles have passing through them a huge number of smaller B-photons, there is a drastic increase in measured particle energy – if we define the particle just below an electron to have mass-energy 1, then with an axial spin it becomes the electron and has energy 9, add x-spin to get 65, then y to get 1024 and z to get 16385. $16385/9=1820.56$ – very close to the accepted difference in mass-energy between an electron and a proton/neutron [5, 9, 57].

The different properties of various baryons and mesons are just caused by the differences in the way the spins are “stacked” [17]. Spins also do away with the need for quarks and various QM non-mechanical properties like “color” and remove the need for a “weak” force as well [18]. Neutrinos are not particles but are instead field waves passing through the B-photon “sea” [19, 20, 21] which is why they are able to pass through nearly all mass as if it wasn’t there.

Charge and Magnetism

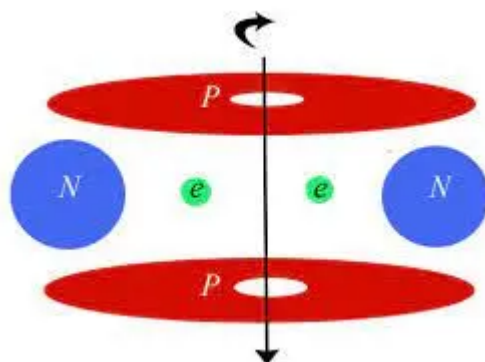
In Miles’s model electrical charge is mass. If you look at the dimensionality in basic units (which doesn’t normally happen as the base units of charge tend to be “hidden” in higher level units) they are the same. In Miles’s model measurable charge is caused by a preferential movement of mass in the form of B-photons in one direction over another [22, 23]. That is why a neutron appears to have no electrical charge – as above the B-photons get “trapped” within the neutron so there is no preferential movement of the B-photons around it, unlike the proton and electron which are channelling the B-photons in a specific direction (or plane). When we have enough charged particles moving the B-photon “wind” in the one direction we can measure this as electricity.

The spin of the B-photons around this are what we can measure as magnetism – hence the right-hand rule [24]. This also does away with the need for the “strong” force [25, 26]. This is what creates what Maxwell proposed as the “E” and “B” fields. Miles’s papers also provide a possible explanation for why e.g. the Earth has a strong magnetic field, whereas the Moon does not, and posits that just as B-photons go both into and out of particles, higher level emergent phenomena like Birkeland currents come in at the poles and mainly leave near the equator [27, 28].

Both protons and electrons are emitting (recycling) B-photons, so that stops them from colliding unless they are heading towards each other at high speed. A proton is recycling a lot more B-photons than an electron, so this “photon wind” will push away a nearby proton a lot more than it would a nearby electron. So protons and electrons do not have “opposite” charge in reality nor are attracted towards each other from a distance; it just looks that way in comparison.

Atoms and Molecules

When protons and electrons and neutrons are forced close enough to each other (e.g. in a dense fast-moving sea of B-photons as occurs on the surface of a star) due to the channelling of the B-photons they can form groups of particles that are more stable than the individuals are in certain configurations (emergent phenomena). Unlike in the standard model electrons do not “orbit” the nucleus or exist in a “cloud of probabilities” but instead circle the axes of protons at the poles, just like a ping-pong ball put into a sink full of water will circle the hole once the plug is pulled [29]. In Miles’s diagrams he generally draws protons as a flat spinning shape with a central hole like a compact disk (CD), to represent the B-photons coming in at the poles and out at the equators, and then the neutrons (when he shows them at all) as circles/spheres that act as little pillars that prevent the proton disks from getting close enough to repulse each other. The electrons tend not to be drawn at all. This leads to a simple diagram of the most stable small nucleus – that of the Helium atom, with 2 protons and 2 neutrons [30, 31].



*From Miles Mathis “Helium4 a Boson?
No” paper [50]*

A good model of the above with the B-photons being channelled can be seen here:

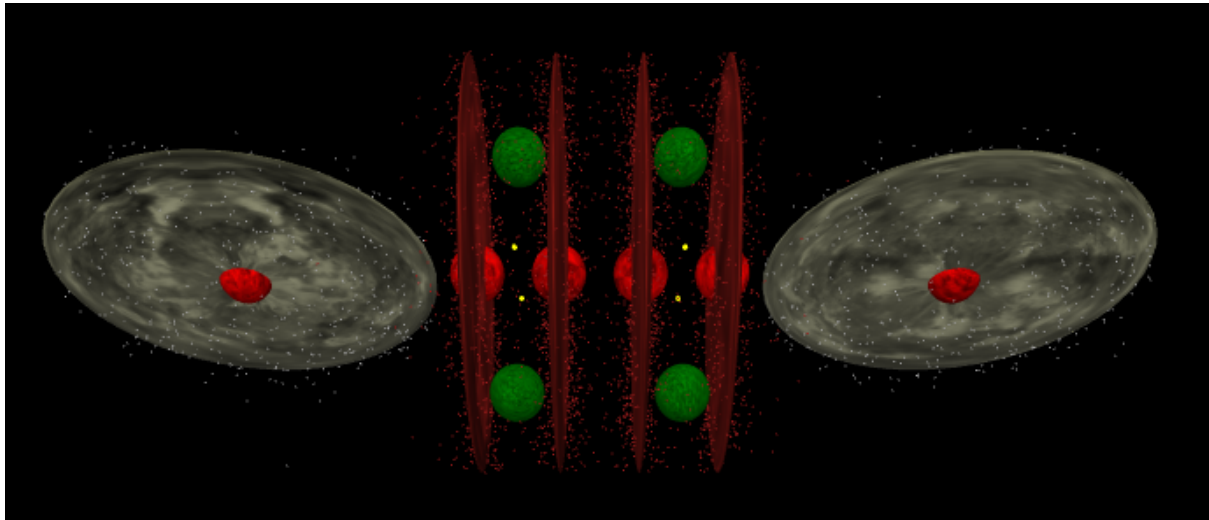
<https://vimeo.com/264207959>.

Miles builds upon the Helium nucleus to show how other elements are created mechanically, and have real structure (rather than just being a random arrangement of protons and neutrons) and also why that in some cases leads to the element being liquid on Earth [32], radioactive [33], or having various other properties (see [34] for semiconductors, [35] for crystals and [36] for quasi-crystal structure, [37, 38] for superconductivity).

Nearly every larger element has this Helium nucleus as the base, which also explains alpha radiation (see also [39] for Deuterium/Tritium). Miles also explains why some elements are better electrical conductors than others, and why some have higher magnetic strength [40], based on how well the B-photons are channelled through the axis and out the equator (or as he calls it the “carousel level”). Nevin has created a very impressive periodic table linking 3D images showing channelling in elements based on Miles’s models with

moving particles – they can be seen linked off

<http://www.users.on.net/~Nevyn/science/physics/PeriodicTable> [52]. Here's an example screenshot of Carbon:



Miles Mathis Carbon Model – from Nevyn's Atomic Viewer [52]

As mentioned above in Miles's model electrons do very little – he has a major break with the standard model here in that he does NOT have electrons playing any real role in molecular bonding. He explains both covalent and ionic bonding with his models of atoms and the B-photon “wind” [41, 42], and clearly explains the ridiculousness of “electron sharing” that lies at the heart of the standard model. He also explains the hydrogen bond and why you get the angles you do in water [43] although interestingly he comes up with a pentagonal rather than hexagonal model (although then explains why it might appear to be hexagonal at the scale we measure it). Miles also uses his model to support the basic findings by Gerald Pollack that explain many of the unusual properties of water as per the first few chapters of “The Fourth Phase of Water” [44, 45], although he's a more critical of the later chapters of the book and comes up with alternative explanations based on his model [46].

Electricity and Current

Electric current as per above in Miles's model is caused by the movement of B-photons. We've already known for some time that it isn't the movement of electrons and protons in wires (as these move relatively slowly, and in the case of alternating current just vibrate in place) although the standard model (and Wikipedia) is still saying it's caused by the movement of “charged particles”. Miles explains electric current as we generally use it in modern life in two of what I consider to be some of Miles's most important papers [47, 48]. In the first he explains why you get the skin effect in AC but not DC, and in fact what AC current actually is – it is not electrons moving back and forth in a wire, which clearly would result in no current at all; he also explains inductance. Then in the latter paper “How a Battery Circuit Works” you get a full mechanical model as to what is actually happening when you connect up a battery to power an electric device; in this case a light bulb.

Miles explains that just as in wireless transmission the source and the receiver have to be coupled – the field in the receiver has to be primed to match the source. Normally the B-photons are moving in all directions, but if a “pre-signal” is created a path then exists for the photons to travel along in bulk (just as you need a “leader” created in the atmosphere for the visible lightning to follow). The coherence in the field then causes the E/M field surrounding the atoms in the receiver to be made coherent – either a coherence in frequency, spin (magnetism) or both. Charge that is directionalised, frequency matched and spin matched will maximise the coupling. So the wires aren’t carrying charge – they are priming the field; some photons pass through the wires and then cohere the E/M field in the bulb. Once that happens the bulk of photons coming out of the battery will travel along this route, pushing the electrons as they go.

Two wires are needed because one wire doesn’t allow for induction – unless you have a really wide wire, which is what the atmosphere of Earth acts like (which is why radio works without the wire, once you have set up your receiver to be frequency-matched to the transmitter). The induction causes *resonance* via the photons colliding with each other. So Tesla was able to transmit energy without physical wires (or in some cases only 1 obvious wire) by ensuring that both the transmitter and receiver were in resonance/coherent; the photons emitted from the transmitter would naturally be drawn to the receiver through the atmosphere and ground. (This is also how so-called quantum teleportation/entanglement works- see [49]). The central theme here is for the transmission of electricity *resonance is key*.

It is at this point that I will stop with my summary of Miles’s model. This is because it is at this point that previous work in Plasma Cosmology and the Electric Universe Theory (PC/EUT) basically starts, which pre-dates much of Miles’s work. I will be giving a summary of this theory (well, group of theories) on [another page](#). Note, however, that Miles’s model does *not* stop here, and continues on to the scale of galaxies and beyond. As such I will be mentioning Miles’s work where relevant in my summary of PC/EUT – e.g. he has explanations for the solar cycle and axial tilt of the planets in our solar system which aren’t covered as well in PC/EUT, in addition to an explanation of why we have two tides per day and several other phenomena.

I will also combine Miles’s Model with that of PC/EUT in [Universe Building](#), where I give a potential explanation of how the Universe formed starting with the microscopic, building up to the cosmos and then heading back towards where we sit in the middle.

References

1. Whilst there might be a lower-level structure than the B-photon, for the purposes of this discussion its existence is meaningless – it would be too small for us to measure, and hence is in the realm of philosophy rather than physics. For purposes of coming up with a model that can explain all matter we do not need to go any further – at least not presently.
2. <http://milesmathis.com/photon3.pdf>
3. <http://milesmathis.com/photon4.html>.
4. 56 million photons per cubic metre => average of a 2.6mm cube per photon; Rp around $2.74 \times 10^{-24}\text{m}$ => Diameter around $5.48 \times 10^{-24}\text{m}$. So if we scale up a photon to the size of a person

around 2m would increase size by 3×10^{23} times so cube about 8×10^{20} m. The solar system is about 250 AU across (heliopause), i.e. around 3.7×10^{13} m. 1 light year $\sim 0.95 \times 10^{16}$ m \Rightarrow Cube around 10,000 light years across. $10^4 \Rightarrow$ volume 10^{12} LY, Milky way around 200,000 light years across but stars mainly in disk about 2000 light years deep. $\frac{4}{3} \pi r^2$ about $4 \times 10^{10} \times 2 \times 10^3 \sim 10^{14}$ so 100 people in the entire galactic volume.

5. <http://milesmathis.com/photon2.html>
6. <http://milesmathis.com/photon.html>
7. <http://milesmathis.com/photon4.html>
8. <http://milesmathis.com/hubb.html>
9. <http://milesmathis.com/elecpro.html>
10. <http://milesmathis.com/planck.html>
11. <http://milesmathis.com/anti.html>
12. <http://milesmathis.com/ether.html>
13. <http://milesmathis.com/mich.html>
14. <http://milesmathis.com/tesla.html>
15. <http://milesmathis.com/quark.html>
16. <https://i.servimg.com/u/f86/19/03/54/41/planet10.jpg>
17. <http://milesmathis.com/meson.html>
18. <http://milesmathis.com/weak2.html>
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40. <http://milesmathis.com/per4.pdf>
41. <http://milesmathis.com/ionic.pdf>
42. <http://milesmathis.com/diatom.pdf>

43. <http://milesmathis.com/water2.pdf>
44. <https://www.pollacklab.org/publications>
45. <http://milesmathis.com/poll.pdf>
46. <http://milesmathis.com/poll2.pdf>
47. <http://milesmathis.com/alt.pdf>
48. <http://milesmathis.com/seft.pdf>
49. <http://milesmathis.com/tele.pdf>
50. <http://milesmathis.com/helboson.pdf>
51. <http://milesmathis.com/charge3.html>
52. Nevyn's Periodic table is at <http://www.users.on.net/~Nevyn/science/physics/PeriodicTable/>
53. Thanks to DragonFace for the Stacked Spins video at <https://vimeo.com/188447627> et al
54. Thanks to <https://ezgif.com> for the ability to create GIFs from videos
55. Chris Wheeler's representation of Miles's wave motion at <http://milesmathis.com/wave.mov>
56. <http://milesmathis.com/spin.pdf>
57. <http://milesmathis.com/mhphoton.pdf>
58. Kinetic theory of gases – pressure, temperature and RMS speed –
<https://openstax.org/books/university-physics-volume-2/pages/2-2-pressure-temperature-and-rms-speed>
59. <http://milesmathis.com/boltz.pdf>
60. <http://milesmathis.com/stefan.html>
61. See e.g. <https://en.wikipedia.org/wiki/Democritus> and
[https://en.wikipedia.org/wiki/Kanada_\(philosopher\)](https://en.wikipedia.org/wiki/Kanada_(philosopher))